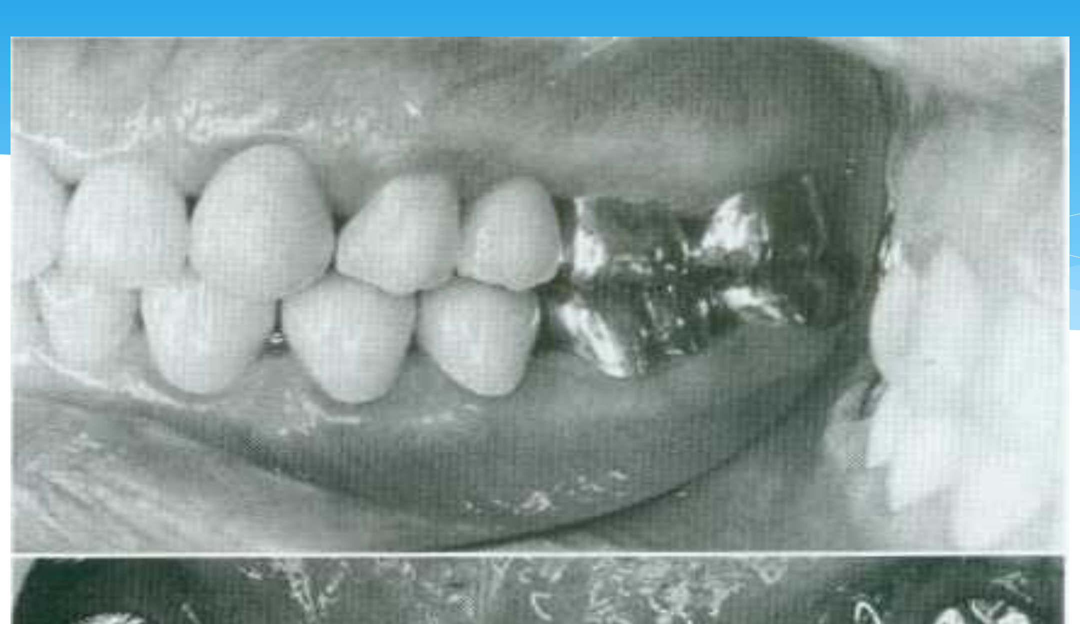
FULL METAL CROWN (Full Veneer)

AHMAD EL-KOUEDI

Lecturer of Crown & Fixed Prosthodontics

Definition

* It is a full coverage metallic restoration that restores the lost function and occlusion.
* It is the most successful cast restoration
* Can be manufactured from base metal alloy or gold alloy





Advantages

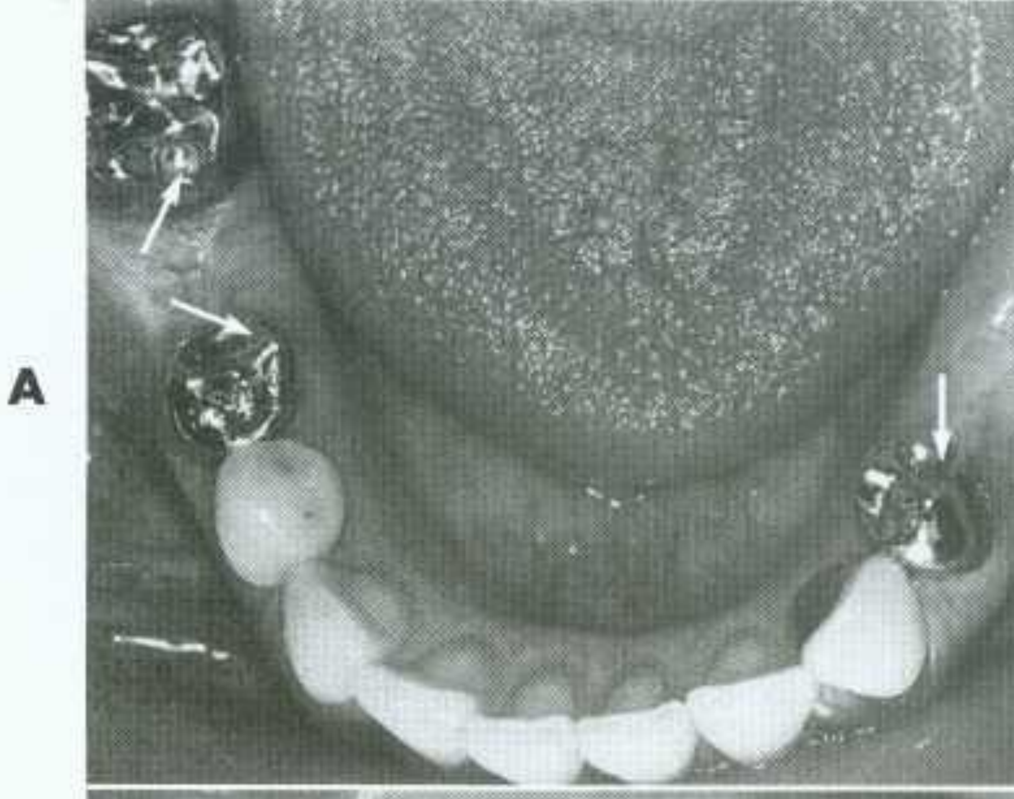
* It has high retention and resistance
* It is very strong, durable
* It can re-adjust axial contours (rotations)
* Can modify the occlusal surface easily (re-establish occlusal plane)

Disadvantages

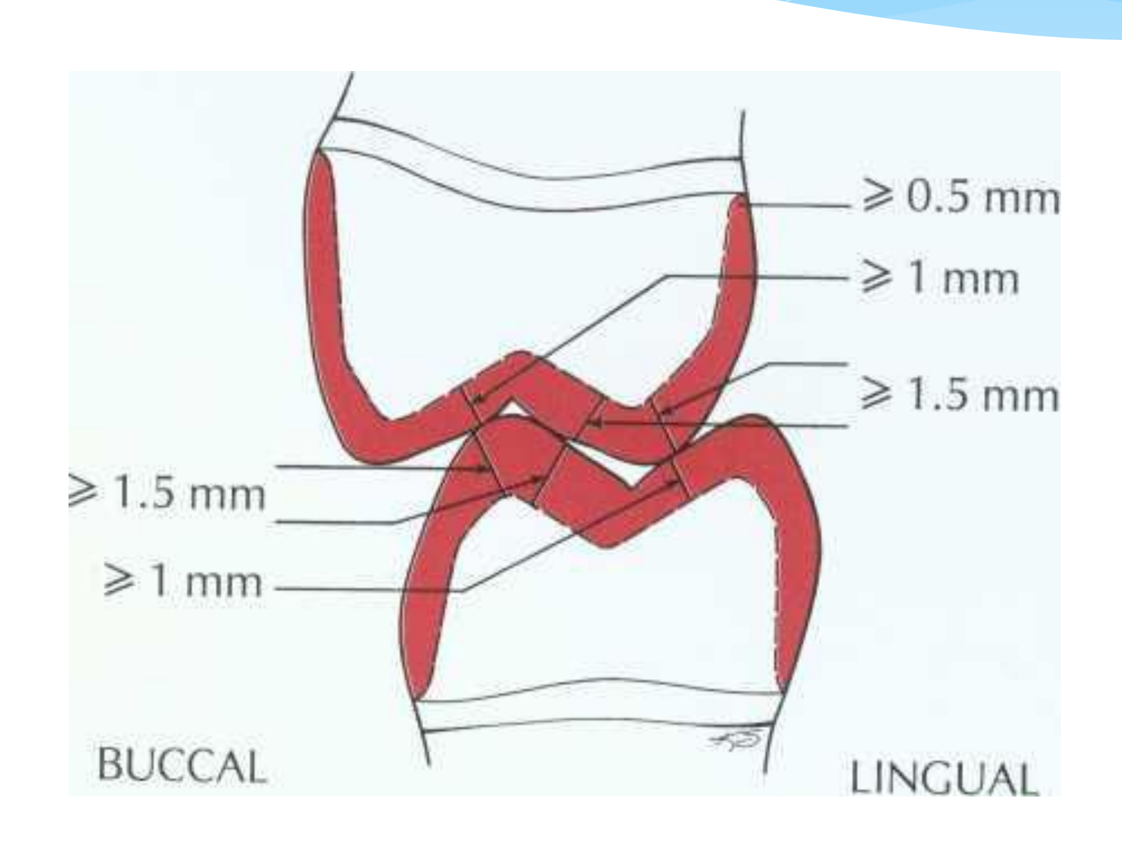
- It is a full coverage therefore not very conservative
- No electric pulp testing can be made
- Metal display can be objectionable to some patients

Indications/Contraindications

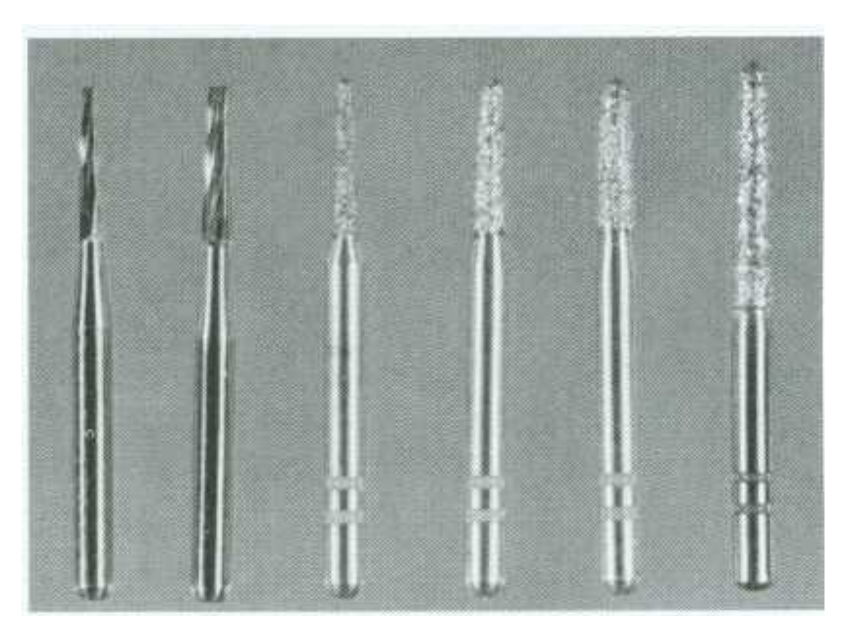
* Posterior teeth
* Where there is extensive coronal damage
* As a single restoration, retainer of a bridge (FPD), as a crown in association with a RPD (prox. guide planes)
* Endodontically treated teeth

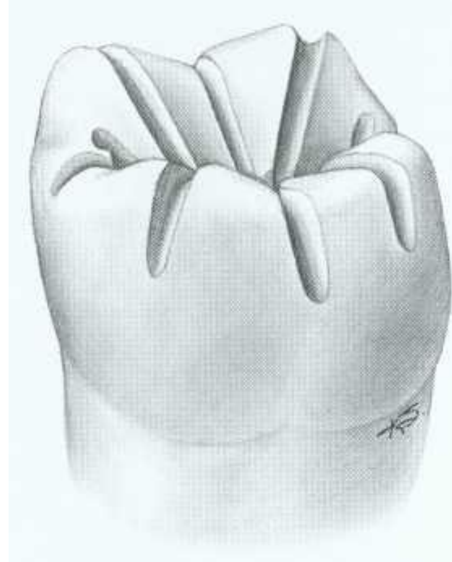

A

B


≥ 0.5 mm
≥ 1 mm
≥ 1.5 mm
≥ 1.5 mm
≥ 1 mm
BUCCAL
LINGUAL

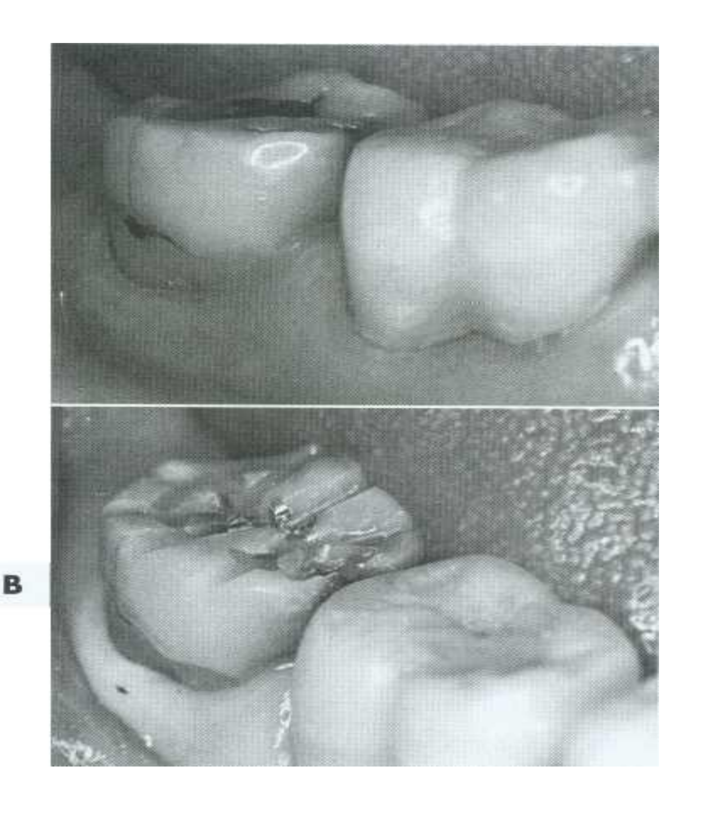
Instruments and depth grooves

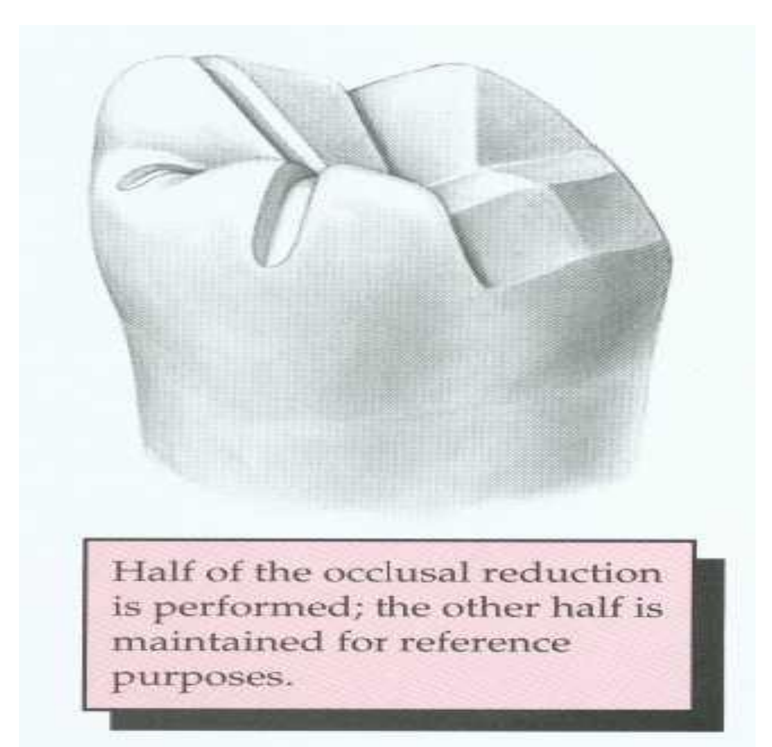




Note that the grooves are deeper for the functional cusp.

Occlusal preparation



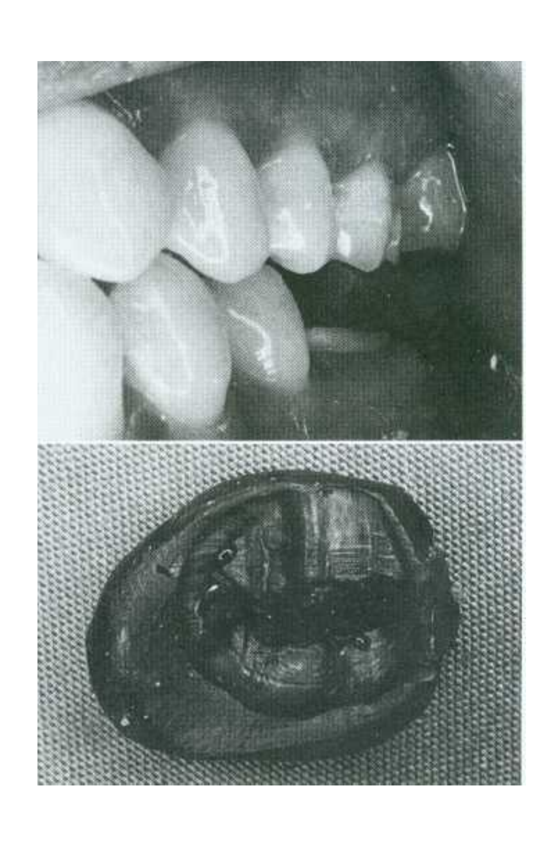


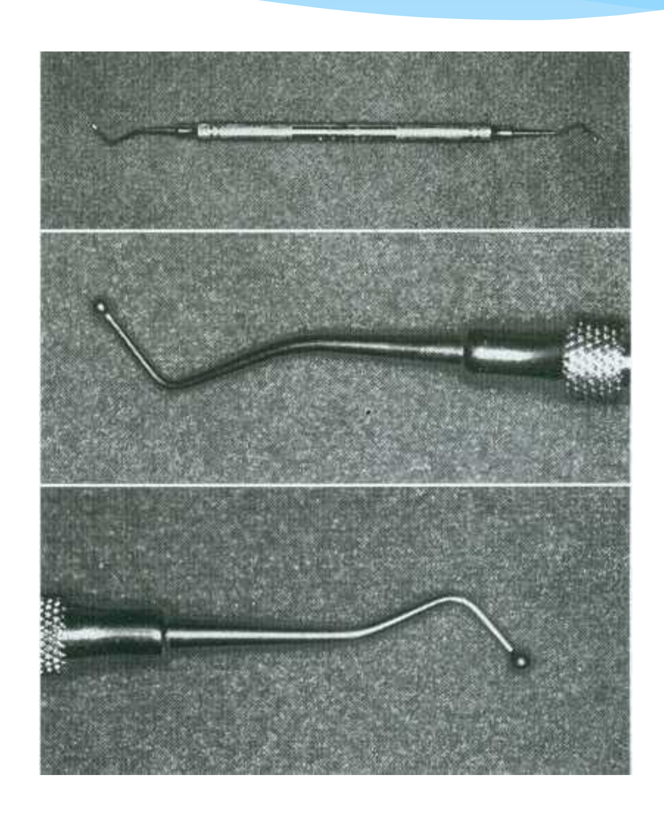


Occlusal reduction

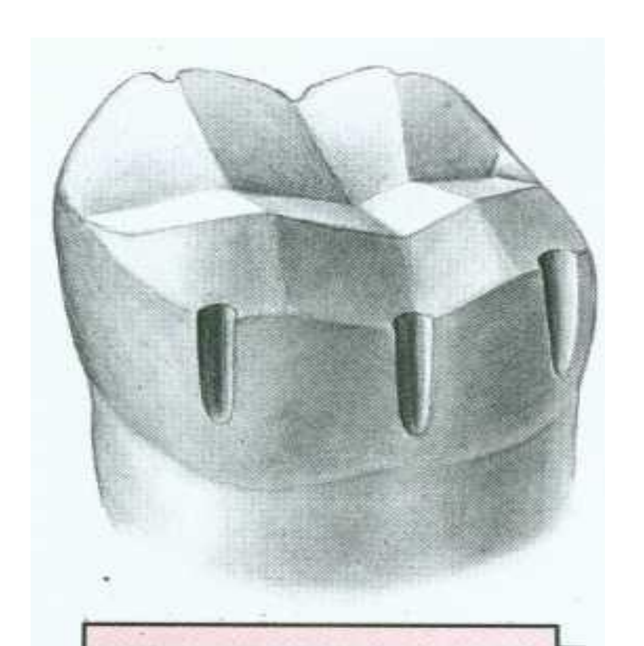
* Minimum reduction of 1mm in non-functional cusp
* Mimimum reduction of 1.5 mm in functional cusp
* Functional cusp bevel on functional cusp

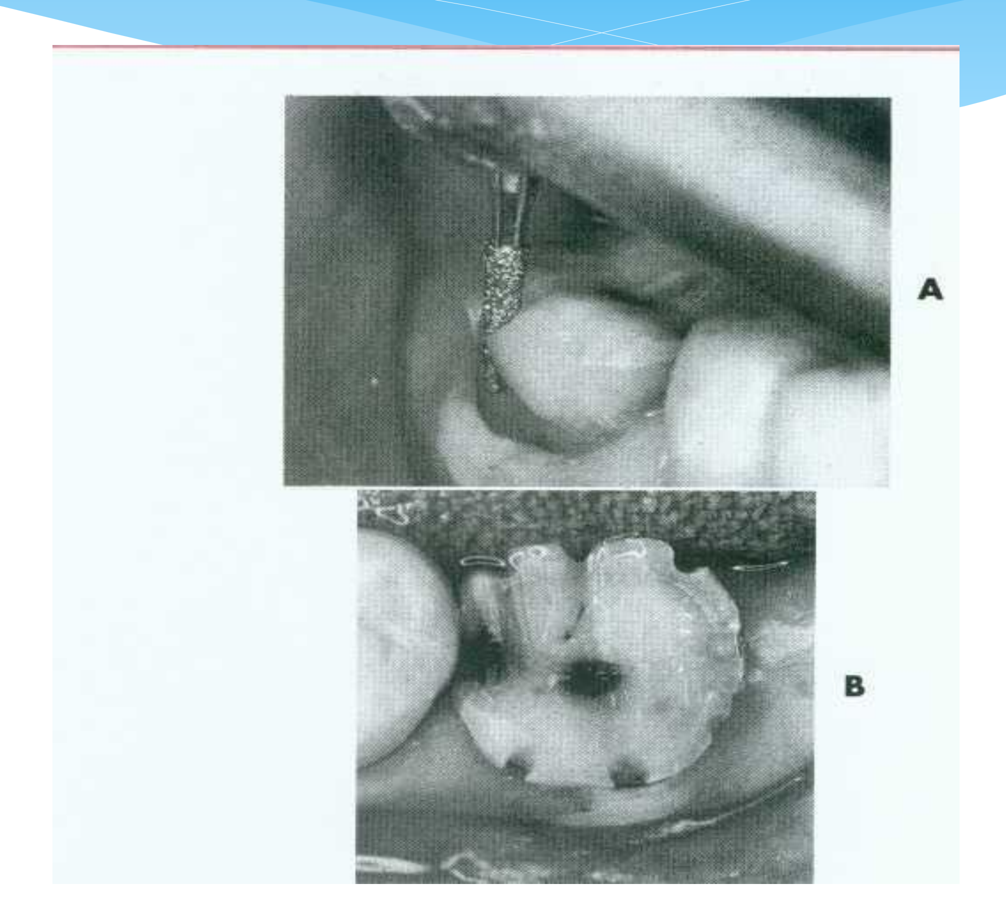
Occlusal assessment





Axial reduction



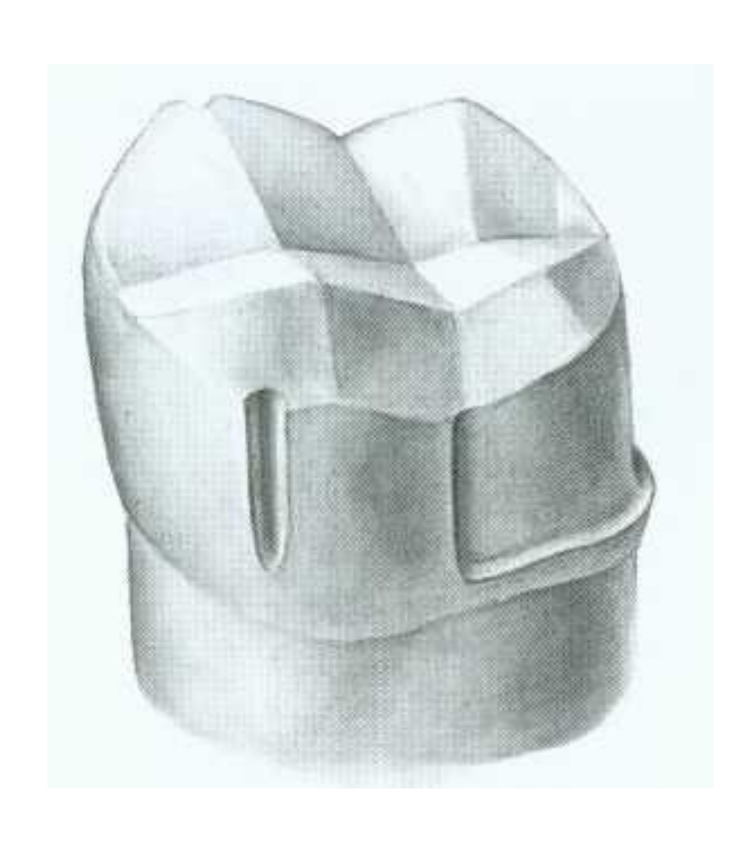




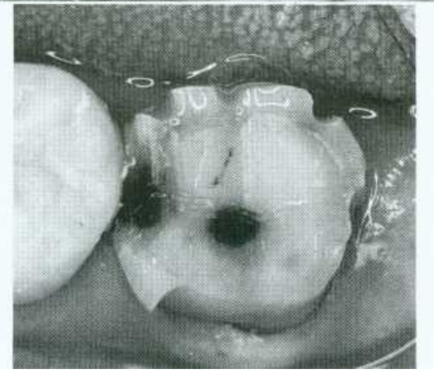
Axial reduction

* All around chamfer finish line
* Depth of 0.5 mm
* Removal of height of contours
* Taper of 6 degrees
* Roundation of line and point angles
* Added means of retention: axial groove

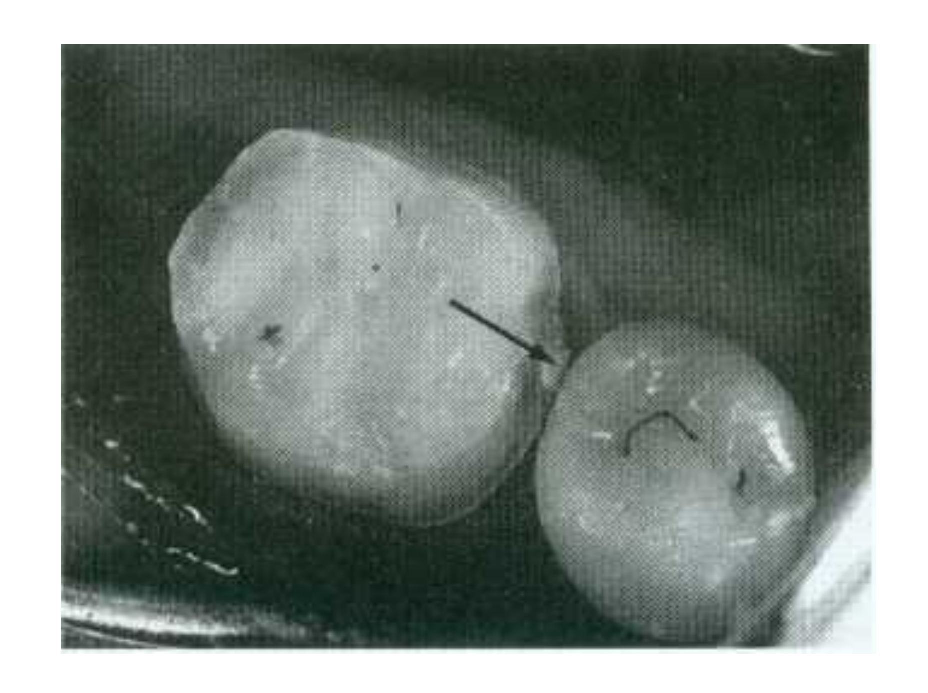
Axial reduction





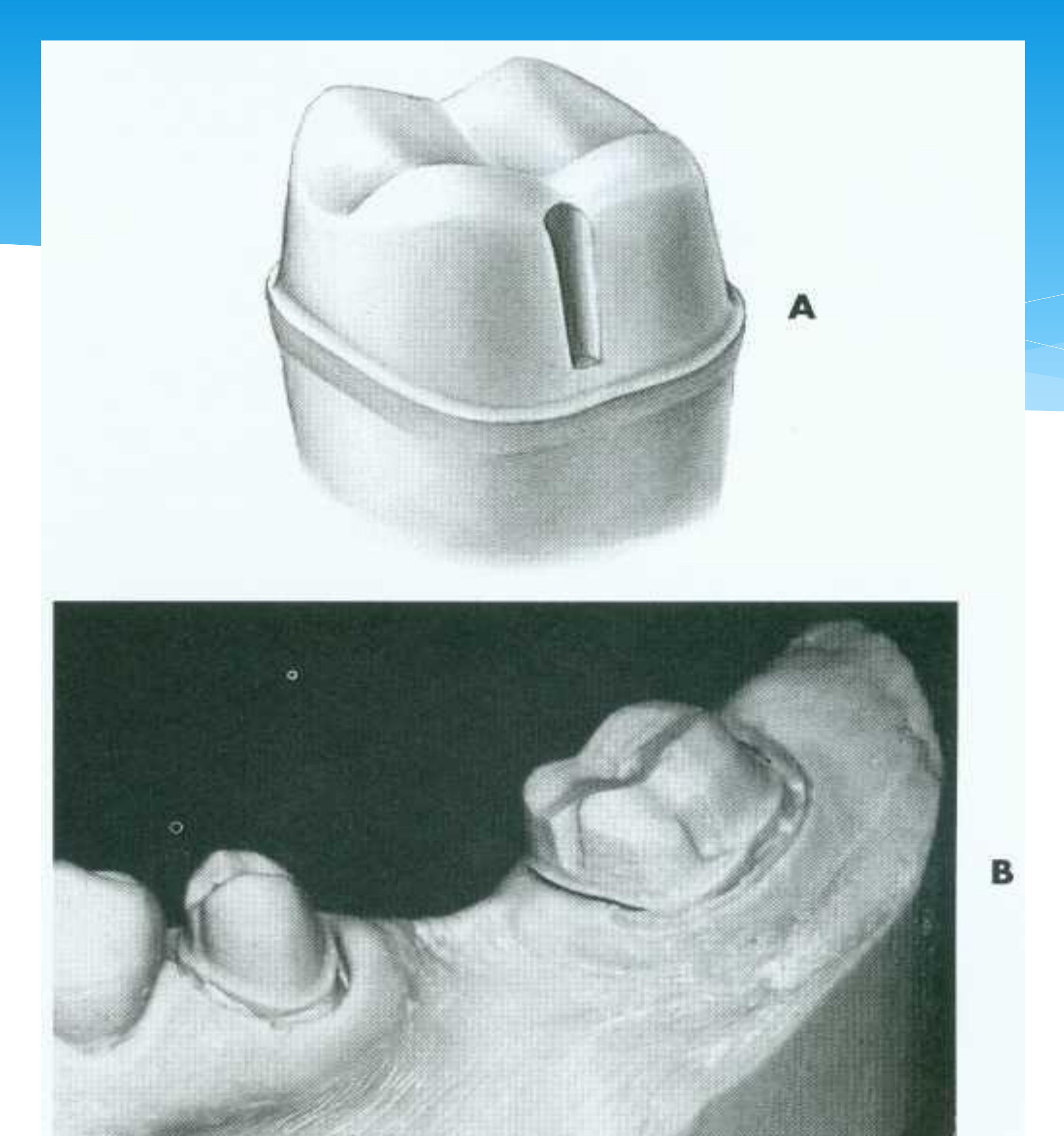


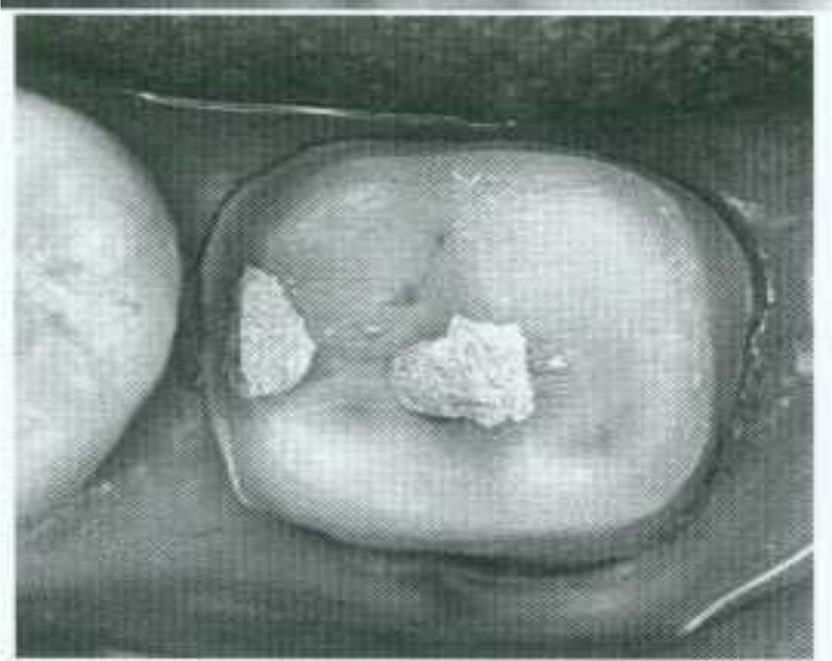
Proximal reduction



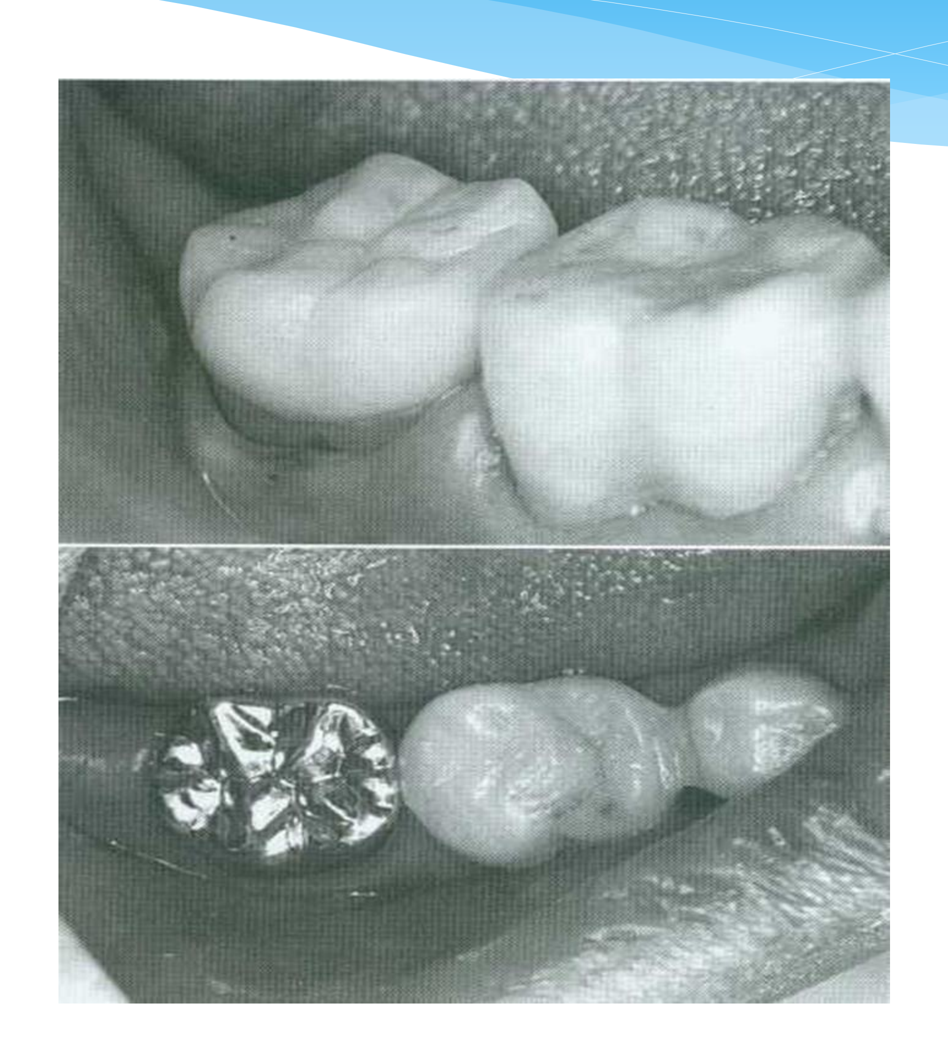
Use a fine tapered stone to break the contact but maintain an enamel lip to protect the adjacent tooth from damage.

Can also use a metal matrix band


A
B

Temporary crown and final restoration



SUMMARY CHART

Indications	Contraindications	Advantages	Disadvantages
Extensive destruction from caries or trauma	Less than maximum retention necessary	Strong	Removal of large amount of tooth structure
Endodontically treated teeth	Esthetics	High retentive qualities	Adverse effects on tissue
Existing restoration		Usually easy to obtain adequate resistance form	Vitality testing not readily feasible
Necessity for maximum retention and strength		Option to modify form and occlusion	Display of metal
To provide contours to receive a removable appliance			
Other recontouring of axial surfaces (minor corrections of malinclinations)			
Correction of occlusal plane			